

## New Claims

1. An apparatus for aftertreating exhaust gases of an internal combustion engine through the use of a reducing agent to be introduced into the exhaust gas, in particular a urea or a urea/water solution, having a mixing chamber (8) into which a reducing agent, which is stored in a reducing agent tank (1), can be introduced via a reducing agent line (1a) and into which compressed air, which is contained in a compressed air tank (20), can be introduced via a compressed air line (24), in order to produce a reducing agent/air mixture, where a check valve is provided for preventing a reflux of the reducing agent or reducing agent/air mixture from the mixing chamber (8) into the compressed air line (24), characterized in that the check valve (14, 15; 70) is disposed in the mixing chamber (8) and has an elastic body (34, 14); when pressure is exerted on it in the compressed air supply device, the elastic body permits compressed air to pass from the compressed air line into a mixing tank of the mixing chamber and when pressure is exerted on it in the opposite direction, the elastic body prevents the reflux.

2. The apparatus according to claim 1, characterized in that the elastic body is an elastic tube (14).

3. The apparatus according to claim 1, characterized in that the elastic body is an elastomer valve body (34) and that the elastomer valve body has a sealing lip (35), which rests in an airtight fashion against an inner wall of a valve housing (46) or the compressed air line (24).

4. A mixing chamber for producing a reducing agent/air mixture, in particular an aerosol, for aftertreating exhaust gases of an internal combustion engine, having a mixing tank (9) into which a reducing agent can be introduced via a reducing agent line (1a) and compressed air can be introduced via a compressed air line (24), characterized in that in order to prevent a reflux of the reducing agent or reducing agent/air mixture from the mixing chamber into the compressed air line, the mixing chamber has a check valve (14, 15; 70) and the check valve has an elastic body (14, 34); when pressure is exerted on it in the compressed air supply device, the elastic body permits compressed air to pass from the compressed air line into a mixing tank of the mixing chamber and when pressure is exerted on it in the opposite direction, the elastic body prevents the reflux.

5. The mixing chamber according to claim 4, characterized in that the elastic body is an elastic tube (14).

6. The mixing chamber according to claim 4, characterized in that the elastic body is an elastomer valve body (34) and that the elastomer valve body has a sealing lip (35), which rests in an airtight fashion against an inner wall of a valve housing (46) or the compressed air line (24).